

FOR:

L'AIR LIQUIDE, SOCIETE ANONYME POUR L'ETUDE ET
L'EXPLOITATION DES PROCEDES GEORGES CLAUDE

ABSTRACT

The invention relates to a process for production of a mixture comprising hydrogen and CO by partial oxidation of a hydrocarbon by an oxygenated medium, according to which the processing is carried out under autothermal conditions with the heat given off by said oxidation being recovered to maintain the endo-thermic reactions which take place between the non-oxidized fraction of said hydrocarbon and the CO₂ and the steam produced by said oxidation, being characterized in that the reaction gas mixture comprising the hydrocarbon and the oxygenated medium is passed through a porous medium (4) which has been preheated beforehand, thus making it possible to heat the reaction gas mixture by heat exchange with the porous medium to a temperature threshold sufficient to initiate combustion reactions, rendering unnecessary an external heat supply when operating continuously.

Figure 1